

## Session No. 3

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**Course Title: Social Dimensions of Disaster, 2<sup>nd</sup> edition**

**Session 3: History of Sociological Research on Disasters**

**Time: 1 hr.**

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### **Objectives:**

- 3.1 Identify and summarize the first sociological study of a disaster
  - 3.2 Describe the work of first disaster research field teams
  - 3.3 Identify three disaster research centers
  - 3.4 Identify six books that have synthesized aspects of the disaster research literature
  - 3.5 Discuss the sociology of disaster research matrix
  - 3.6 Summarize at least two trends in disaster research
  - 3.7 Summarize the key ideas that define disasters as social problems
  - 3.8 Identify four principles of the hazard mitigation perspective.
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### **Scope:**

This session introduces students to the origins of disaster research, major research centers, and key synthesizing books. The range of research topics and questions that define the field and major trends will be summarized. Two alternative approaches, i.e., social problem and hazard mitigation, will be contrasted.

### **Readings:**

#### *Student Reading:*

Kreps, Gary A. 2001. "Disasters, Sociology of". Pages 3718-3721 in *International Encyclopedia of the Social Behavioral Sciences* edited by Neil J. Smelser and Paul B. Baltes. Amsterdam: Elsevier.

#### *Professor Readings:*

Aguirre, Benigno E. 2002. "Can Sustainable Development Sustain Us?" *International Journal of Mass Emergencies and Disasters* 20:111-125.

Quarantelli, E.L. 1997. "The Disaster Research Center Field Studies of Organized Behavior in the Crisis Time Period of Disasters." *International Journal of Mass Emergencies and Disasters* 15:47-70.

Mileti, Dennis S. 1999. *Disasters By Design: A Reassessment of Natural Hazards in the United States*. Washington, D.C.: Joseph Henry Press (Chapter One only, entitled "A Sustainability Framework for Natural and Technological Hazards," pp. 17-39).

*Background References:*

Fritz, Charles E. 1961. "Disasters." Pp. 651-694 in *Contemporary Social Problems*, edited by Robert K. Merton and Robert A. Nisbet. New York: Harcourt.

Scanlon, T. Joseph. 1988. "Disaster's Little Known Pioneer: Canada's Samuel Henry Prince." *International Journal of Mass Emergencies and Disasters* 6:213-232.

Quarantelli, E.L. 1987. "Disaster Studies: An Analysis of the Social Historical Factors Affecting the Development of Research in the Area." *International Journal of Mass Emergencies and Disasters* 5:285-310.

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**General Requirements:**

Student handouts (3-1 and 3-3 appended).

Overheads (3-1 through 3-5 appended).

See individual requirements for each objective.

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**Objective 3.1 Identify and summarize the first sociological study of disaster.**

**Requirements:**

Start this session with student exercise and proceed with lecture material specified below.

Use Overheads 3-1 and 3-2.

**Remarks:**

I. Introduction.

A. Exercise.

1. Remind students of exercise procedures.
2. **Divide** class into four groups and assign student roles.
  - a. Chair.
  - b. Reporter.
  - c. Timer.
3. **Announce** time limit: 5 minutes.

**B. Display** Overhead 3-1; “Workshop Tasks”.

1. Group 1 – According to Kreps (2001), what are the major trends in disaster research? (Select 4)
2. Group 2 – Why are the thousands of people killed annually in car crashed **not** defined as “a disaster”? Why is it important to ask this question?
3. Group 3 – According to Kreps (2001), how do disasters differ from other social problems?
4. Group 4 – What are disaster “claims-making” activities? (Select 3 examples)

**C. Start** discussion.

**D. Stop** discussion.

- E. Explain that **group reports** will be **deferred** until later in the session, i.e., relevant to Objectives 3.6 and 3.7.

**II. First Sociological Study of Disaster.**

**A. Display** Overhead 3-2; “First Sociological Study of Disaster”.

**B. Review** key points listed.

1. **Event:** Explosion.
2. **Date:** December 6, 1917.
3. **Location:** Halifax, Nova Scotia, Canada (harbor).

4. **Cause:** Ship collision: French munitioner carrying trinitrotoluene (TNT) collided with a Belgian relief ship near Halifax harbor.
5. **Deaths:** 1,963.
6. **Injured:** 9,000.
7. **Researcher:** Samuel Henry Prince.
8. **Doctoral Thesis:** Columbia University, New York City.
9. **Title:** *Catastrophe and Social Change* (1920).
10. **Importance:** First empirically documented observations **generalizable** to other disasters.

C. Example Generalizations.

1. **Lack of preparedness:** no city disaster plan.
2. **Family priorities:** people checked on each other.
3. **Convergence behavior:** 3,500 volunteers helped.
4. **Rumors:** second explosion was rumored.
5. **Fear of looting:** military troops were posted; no looting occurred.

**Supplemental Considerations:**

Explain that S.H. Prince was the Assistant Rector of St. Paul's Church in Halifax. He had assisted with caring for the dead, many survivors, and impacted families after the explosion at the harbor. In May, 1919 he enrolled in a Ph.D. program and studied with F.H. Giddings. His dissertation summarized the community response to the explosion and identified **numerous generalizations** that could be **applicable** to other disasters (see Scanlon 1988).

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**Objective 3.2 Describe the work of the first disaster research field teams.**

**Requirements:**

Use Overhead 3-3.

**Remarks:**

I. First Field Teams.

A. **Display** Overhead 3-3; “First Disaster Research Field Teams”.

B. **Review** key points.

1. **Research Unit:** National Opinion Research Center (NORC)
2. **Location:** University of Chicago.
3. **Dates:** 1950-1954.
4. **Director:** Charles E. Fritz.
5. **Funding:** Army Chemical Center, Chemical Corps Medical Laboratories.

II. **Example Events Studied.**

A. **Earthquake** – Bakersfield, California.

B. **Airplane Crashes** – 3 consecutive crashes near Elizabeth, New Jersey.

C. **Tornado** – several towns in Northeast Arkansas.

D. **Comparative Analysis** – documented patterns in disaster behavior among different events, e.g., convergence behavior.

**Supplemental Considerations:**

Emphasize the decisive impact that the NORC field teams had on the future development of disaster research. They established a quick response **methodology** to capture perishable material quickly before memories were blurred or distorted. Due to the prestige of the University of Chicago, their future **publications** attained high visibility. For example, the first book chapter on disasters to be published in a **social problems** text was completed by the team director, Charles E. Fritz (see list of “Major Synthesizing Works” appended; Student Handout 3-2). Certain **graduate students**, especially E.L. Quarantelli, continued to publish in this area.

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**Objective 3.3 Identify three disaster research centers.**

**Requirements:**

Use Student Handout 3-1.

**Remarks:**

- I. First Disaster Research Centers.
  - A. **Distribute** Student Handout 3-1; “First Disaster Research Centers.”
  - B. **Review** key points.
- II. National Opinion Research Center (NORC)
  - A. **Dates:** 1950 – 1954.
  - B. **Location:** University of Chicago.
  - C. **Director:** Charles E. Fritz.
  - D. **Contribution:** first cross-disaster comparative study by field teams that arrived on scene shortly after impact.
- III. National Academy of Sciences (NAS)
  - A. **Dates:** 1952 – present.
  - B. **Key staff:** Charles E. Fritz, 1954-1959; 1971-1992.
  - C. Linked researchers to **funding**.
  - D. Extensive **publication series** formed cornerstone in new knowledge base (examples):
    - 1. *Houston Fireworks Explosion* (Killian, 1956).
    - 2. *Tornado in Worcester, Massachusetts* (Wallace, 1956).
  - E. Promotion of **policy** applications (examples):
    - 1. Panel on Public Policy Implications of Earthquake Prediction (1975).
    - 2. Committee on Disasters and the Media (1980).
    - 3. Committee on Science and Technology for Countering Terrorism (2002).
- IV. Disaster Research Center (DRC).

- A. **Dates:** 1963 – present.
  - B. **Location:** Ohio State University – 1963-1985; **relocated** to University of Delaware.
  - C. **Founders:** E.L. Quarantelli; J.E. Haas; and R.R. Dynes.
  - D. **Contributions:**
    - 1. Specialized library.
    - 2. Quick response field teams; training for dozens of researchers.
    - 3. Data archives, including NORC data.
    - 4. International collaboration (joint conferences and studies).
- V. Natural Hazards Research and Applications Information Center (NHRAIC).
- A. **Dates:** 1975 – present.
  - B. **Location:** University of Colorado.
  - C. **Founders:** Gilbert F. White and J.E. Haas.
  - D. **Contributions.**
    - 1. Annual workshops; 350 researchers, emergency managers, private sector.
    - 2. *Natural Hazards Observer* (bi-monthly, circulation – over 19,000).
    - 3. Quick Response grants; two to three dozen awarded annually, permits immediate travel.
    - 4. Monograph series; over 60 published.
- VI. Other Research Centers.
- A. **Variation** in size, focus, and longevity.
  - B. **Examples** include:
    - 1. Hazard Management Group, Oak Ridge National Laboratory.
    - 2. Hazards Reduction and Recovery Center, Texas A & M University.

3. International Hurricane Center, Florida International University.
4. Center for Technology, Environment and Development, Clark University.

### **Supplemental Considerations:**

Depending on course focus, this section could be limited to brief review of the handout to extensive discussion of each center, example research studies, and types of academic programs. The key message of the section is that there is a “**community of scholars**” and personal networks. Some reflect links between professors and former students, e.g., Fritz supervised Quarantelli at NORC. Others reflect collaborative research studies, task force groups, professional association activities, etc.

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### **Objective 3.4 Identify six books that have synthesized aspects of the disaster research literature.**

#### **Requirements:**

Use Student Handouts 3-2 and 3-3.

#### **Remarks:**

- I. Major Synthesizing Works.
  - A. **Distribute** Student Handout 3-2.
  - B. Briefly **review**:
    1. Emphasize that this handout is a **student resource**.
    2. Students should note the frequency these works might be cited in their future readings.
    3. Example: in assigned reading (i.e., Kreps 2001), four are cited in bibliography.
- II. Additional Resources.
  - A. *Annual Review of Sociology*.
    1. Style – author is asked to summarize major developments in field during past five to ten years.



2. Examples (highlight listings in bibliography in Kreps 2001).

- a. Clarke and Short 1993.
- b. Kreps 1984.
- c. Quarantelli and Dynes 1977.

**B. Specialized Journals – examples:**

- 1. Distribute Student Handout 3-3; “Specialized Disaster Journals.”
- 2. Briefly **review** examples.
  - a. *International Journal of Mass Emergencies and Disasters.*
  - b. *Disasters: The Journal of Disaster Studies, Policy and Management.*
  - c. *Australian Journal of Emergency Management.*
  - d. *Journal of American Society of Professional Emergency Planners.*
  - e. Others.

**Supplemental Considerations:**

The message of this section is that there is a **core of scientific knowledge** that has been created during the past forty years. This knowledge base provides the theoretical and scientific basis for the emergency management profession. The books and journals are items with which all students of disaster and emergency management should be familiar, at least by name. Required student readings selected for this course represent a **small sampling** from this knowledge base. Further study at the graduate level requires extensive reading from these and other journals plus books like these.

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**Objective 3.5 Discuss the Sociology of Disaster Research Matrix.**

**Requirements:**

Use Overhead 3-4.

**Remarks:**

- I. Sociology of Disaster Research Matrix.

A. **Display** Overhead 3-4; “Sociology of Disaster Research Matrix.”

B. **Review** Matrix.

1. **Social systems** are the objects of study (left hand column).
2. Examples vary in **complexity** from individuals, to groups like families, to communities, etc.
3. Studies vary by **disaster phase** (the four rows, e.g., response and recovery).
4. Researchers usually focus a study on **one type** of social system within one disaster phase.

C. **Example** studies:

1. **Ask** students: “What would be an example of a research question that reflects the Matrix cell identified by the letter “f”?”
2. **Answer:** when families evacuate from their homes, where are they most likely to go?”
3. **Review** additional examples as time permits.
  - a. Cell d: What individual characteristics affect the way hazards are perceived?
  - b. Cell k: What organizational transformations occur during disaster recovery processes?
  - c. Cell q: What is the structure of the emergency planning system for Australia (or any other society)?
  - d. Cell w: What patterns of cooperation and conflict exist among Red Cross donor societies during an international recovery operation following a major disaster?

### **Supplemental Considerations:**

This section could be expanded if the professor desires greater emphasis on research. The matrix is a useful discussion tool to encourage students to **conceptualize** alternative research questions. The key objective of the section, however, is to insure that students understand the enormous **scope** and **complexity** that comprise both disaster research and emergency management.

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**Objective 3.6 Summarize at least two trends in disaster research.**

**Requirements:**

Use Overhead 3-1.

**Remarks:**

- I. Major trends: **Workshop conclusions.**
  - A. **Display** Overhead 3-1; “Workshop Tasks”.
  - B. Ask the reporter from Group 1 to summarize their conclusions (2 minutes).
  - C. Elaborate as necessary to insure the following points are highlighted.
- II. Major trends: **Kreps** (2001).
  - A. Shift from response focus to include other three phases.
  - B. Shift from sociological to multidisciplinary.
  - C. Shift from U.S.A. focus to international community of scholars.
  - D. Shift from focus on events with rapid onset to broader range, e.g., drought.
  - E. Shift from viewing disasters as natural events to emphasis on political and social processes.

**Supplemental Considerations:**

This section provides a brief introduction to **future directions** in disaster research. Some professors may wish to expand the time allocation and explore this issue in more depth. The **message** of this section should be that the field is vibrant, changing, and intellectually challenging.

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**Objective 3.7 Summarize the key ideas that define disasters as social problems.**

**Requirements:**

Use Overhead 3-1; “Workshop Tasks”.

**Remarks:**

- I. What is a social problem?
  - A. Ask students: “What are some examples of social problems in American society today?”
  - B. Using such student proposed examples as crime, poverty, pollution, unemployment, discrimination, etc., read a definition.
  - C. **Example:** A **social problem** is “. . . an alleged situation that is incompatible with the values of a significant number of people who agree that action is needed to alter the situation.” (Rubington and Weinberg 2003, p. 4).
- II. The **definitional** process.
  - A. Ask for a report from Group 2 (2 minutes).
  - B. **Elaborate** as necessary to insure the following points are highlighted.
    1. Daily car crashes are perceived as “acceptable risks”.
    2. Same number of people killed in one explosion would be defined as a disaster.
    3. The question is important because it **highlights** the social processes whereby some events **become defined** as disasters and others do not.
- III. Disasters are non-routine social problems.
  - A. Ask for a report from Group 3 (2 minutes).
  - B. **Elaborate** as necessary to insure the following points are highlighted (based on Kreps 2001, p. 3719).
    1. Unlike poverty, a disaster can be **demarcated** in social time and space.
    2. **Distinctions** can be made regarding actions taken before, during, and after a specific disaster event.
    3. Disasters remain a **low priority** for local officials and the public because the probability of impact is low.
    4. When certain **triggering events** occur, the perception of risk distribution may be redefined by key interest groups thereby permitting temporary acceptance of selected preparedness and/or mitigative actions (e.g., changes in airport security after 9-11 attacks).

- C. Quote Kreps (2001): “Thus, disasters are nonroutine problems because social processes related to them change dramatically, depending on what stage of their life histories is being considered.” (p. 3719).

IV. Claims-making activities.

- A. Ask Group 4 to report (2 minutes).

- B. Highlight and supplement as required.

1. **Definition:** “. . . collective action that asserts the existence of conditions and defines them as problems.” (Kreps 2001, p. 3718).
2. The process whereby social problems are “**constructed**.”
3. People come forward and **make claims**.
4. **Examples:**
  - a. Engineering report that maps seismic zones within a community.
  - b. Floodplain analysis wherein the 100-year flood boundary is identified.
5. “Response activities” are collective actions proposed to **solve** or **reduce** the conditions identified by “claims-makers.”
6. **Examples:**
  - a. Emergency manager **advocating** zoning restrictions in a flood prone area.
  - b. Citizen group **promoting** earthquake preparedness kits.

- C. Quote Kreps (2001): “The life histories of disasters can be compared with other social problems because this social structure of claims-making and response activities is the core object of study.” (pp. 3718-3719).

**Supplemental Considerations:**

Depending on the context within which this course is offered, this section could be expanded through student discussion. If most have completed a course in social problems and sociological theory, for example, these issues could be pursued in more depth. For others, the **key message** is that some sociologists currently are advocating a

social problems perspective in the study of disasters, much as did Fritz (1961), the Director of the NORC field teams during the early 1950's. This approach reflects an **alternative** to the hazard mitigation perspective which will conclude the session. These are but two of several theoretical positions that are being advocated currently.

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### **Objective 3.8 Identify four principles of the hazard mitigation perspective.**

#### **Requirements:**

Use Overhead 3-5.

#### **Remarks:**

- I. Origins.
  - A. **Display** Overhead 3-5; "Sustainable Hazards Mitigation Approach."
  - B. **Early Developers:** Social Geographers.
    1. Origins in social geography.
    2. Example researchers, e.g., Gilbert F. White; Robert Kates; Ian Burton.
  - C. Key research question: "Why do people locate homes in flood prone areas?"
  - D. Current advocate: Dennis S. Mileti.
    1. Former student of J.E. Haas during establishment of NHRAIC.
    2. Long-term NHRAIC Director (1994-2002).
- II. Basic Principles.
  - A. **Display** Overhead 3-5; "Sustainable Hazards Mitigation Approach."
  - B. **Comment** briefly on the **six principles** that comprise the "sustainable hazards mitigation approach." (adapted from Mileti 1999, pp. 30-35).
    1. "Maintain and, if possible, enhance environmental quality." (p. 31)
    2. "Maintain and, if possible, enhance people's quality of life." (p. 31)
    3. "Foster local resiliency to and responsibility for disasters." (p. 32)

4. "Recognize that sustainable, vital local economies are essential." (p. 33)
5. "Identify and ensure inter- and intragenerational equity." (p. 33)
6. "Adopt a consensus-building approach, starting at the locals level." (p. 34)

### Supplemental Considerations:

Some professors may wish to expand and emphasize Mileti's approach in more detail. The **message** of this section, however, is that this approach places disaster research into a broader environmental context rather than an event focus. Also, conflict-based disaster events like the 9-11 attacks, riots, and other forms of civil unrest, including war, are **addressed minimally**, if at all. Drought, fog, hail and other environmental hazards are highlighted, however. Typically, the more event focused, social problems oriented researchers like Kreps, have not addressed these hazards although they could. For a recent critique of Mileti's approach see Aguirre (2002).

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### Course Developer References:

- I. Aguirre, Benigno E. 2002. "Can Sustainable Development Sustain Us?" *International Journal of Mass Emergencies and Disaster* 26:111-125.
- II. Clarke, L. and J.F. Short. 1993. "Social Organization and Risk: Some Current Controversies." *Annual Review of Sociology* 19:375-399.
- III. Committee on Science and Technology for Countering Terrorism. 2002. *Making the National Safer: The Role of Science and Technology in Countering Terrorism*. Washington, D.C.: National Academies Press.
- IV. Fritz, Charles E. 1961. "Disasters." Pp. 651-694 in *Contemporary Social Problems*, edited by Robert K. Merton and Robert A. Nisbet. New York: Harcourt.
- V. Killian, Lewis M. 1956. *A Study of Response to the Houston, Texas Fireworks Explosion*. Washington, D.C.: National Academy of Sciences.
- VI. Kreps, Gary A. 2001. "Disasters, Sociology of." Pp. 3718-3721 in *International Encyclopedia of the Social & Behavioral Sciences*, edited by Neil J. Smelser and Paul B. Boltes. Amsterdam: Elsevier.
- VII. Kreps, Gary A. 1984. "Sociological Inquiry and Disaster Research. *Annual Review of Sociology* 10:309-330.

- VIII. Mileti, Dennis S. 1999. *Disasters By Design: A Reassessment of Natural Hazards in the United States*. Washington, D.C.: Joseph Henry Press.
- IX. Panel on the Public Policy Implications of Earthquake Prediction. 1975. *Earthquake Prediction and Public Policy*. Washington, D.C.: National Academy of Sciences.
- X. Prince, Samuel Henry. 1920. *Catastrophe and Social Change*. New York: Department of Political Science, Columbia University (Ph.D. thesis).
- XI. Quarantelli, E.L. 1997. "The Disaster Research Center Field Studies of Organized Behavior in the Crisis Time Period of Disasters." *International Journal of Mass Emergencies and Disasters* 15:47-69.
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- XIII. Quarantelli, E.L. and R.R. Dynes. 1977. "Response to Social Crisis and Disaster." *Annual Review of Sociology* 3:23-49.
- XIV. Rubington, Earl and Martin S. Weinberg. 2003. *The Study of Social Problems: Seven Perspectives*, 6<sup>th</sup> edition. New York: Oxford University Press.
- XV. Scanlon, T. Joseph. 1988. "Disaster's Little Known Pioneer: Canada's Samuel Henry Prince." *International Journal of Mass Emergencies and Disasters* 6:213-232.
- XVI. Wallace, Anthony F.C. 1956. *Tornado in Worcester*. Washington, D.C.: National Academy of Sciences.



